CLAIMS:

1.   A method of separation of an antibody from a mixture of the antibody and at least one contaminant, the method comprising:

(a)   placing the antibody and contaminant mixture in a first solvent stream,
5   the first solvent stream being separated from a second solvent stream by an
· electrophoretic membrane;

(b)   selecting a pH for the first solvent stream such that contaminants with an isoelectric point (p*I*) lower than the antibody to be separated will be charged;

10   (c)   applying an electric potential between the two solvent streams causing movement of at least some of the contaminants through the membrane into the second solvent stream while the antibody is substantially retained in the first solvent stream, or if entering the membrane, being substantially prevented from entering the second solvent stream;

15   (d)   optionally, periodically stopping and reversing the electric potential to cause movement of any antibody having entered the membrane to move back into the first solvent stream, wherein substantially not causing any contaminants that have entered the second solvent stream to re-enter first solvent stream; and

20   (e)   repeating step (c) and optionally step (d) until the first solvent stream contains the desired purity of antibody.

2.   The method according to claim 1 wherein the antibody and contaminant mixture is a monoclonal antibody in ascitic fluid.

3.   The method according to claim 1 or 2 wherein the electrophoretic
25   membrane has a molecular mass cut-off of 50 to 150 kDa.

4.   The method according to claim 3 wherein the electrophoretic membrane has a molecular mass cut-off of 100 kDa.

5.   The method according to any one of claims 1 to 4 wherein the pH of the first solvent stream is 7.5 to 9.5.

30   6.   The method according to any one of claims 1 to 5 further including the steps of:

(f)   placing the separated antibody in a fresh first solvent stream, the first solvent stream being separated from a second solvent stream by an · electrophoretic membrane;

35   (g)   selecting a pH of the fresh first solvent stream such that the pH is within 1 pH unit of the p*I* of the antibody:

(h) applying an electric potential between the two solvent streams causing movement of at least some of the contaminants through the membrane into the second solvent stream while the antibody is substantially retained in the fresh first solvent stream, or if entering the membrane. being substantially prevented from entering the second solvent stream;

(i) optionally. periodically stopping and reversing the electric potential to cause movement of any antibody having entered the membrane to move back into the fresh first solvent stream. wherein substantially not causing any contaminants that have entered the second solvent stream to re-enter fresh first solvent stream; and

(j) repeating step (h) and optionally step (i) until the fresh first solvent stream contains the desired purity of antibody.

7. The method according to claim 6 wherein the molecular mass cut-off of the membrane used in step (f) is larger than that used in step (b).

8. The method according to claim 7 wherein the molecular mass cut-off of the electrophoretic membrane used in step (f) is at least 200 kDa.

9. The method according to claim 8 wherein the molecular mass cut-off of the electrophoretic membrane used in step (f) is 1000 kDa.

10. The method according to any one of claims 6 to 9 wherein the pH in step (g) is from 6 to 8.

11. The method according any one of claims 6 to 9 wherein the pH in step (g) is within 0.5 pH units of the p*I* of the antibody.

12. The method according to any one of claims 1 to 11 wherein percent recovery of the antibody is at least 70%.

13. The method according to claim 12 wherein percent recovery of the antibody is at least 90%.

14. A method of separation of an antibody from a mixture of the antibody and at least one contaminant. the method comprising:

(a) placing the separated antibody in a first solvent stream, the first solvent stream being separated from a second solvent stream by an electrophoretic membrane;

(b) selecting a pH of the first solvent stream such that the pH is within 1 pH unit of the p*I* of the antibody;

(c) applying an electric potential between the two solvent streams causing movement of at least some of the contaminants through the membrane into the second solvent stream while the antibody is substantially retained in the

first solvent stream, or if entering the membrane, being substantially prevented from entering the second solvent stream:

(d)   optionally, periodically stopping and reversing the electric potential to cause movement of any antibody having entered the membrane to move back into the first solvent stream, wherein substantially not causing any contaminants that have entered the second solvent stream to re-enter first solvent stream: and

(e)   repeating step (c) and optionally step (d) until the first solvent stream contains the desired purity of antibody.

15.   The method according to claim 14 wherein the antibody and contaminant mixture is a monoclonal antibody in ascitic fluid.

16.   The method according to claim 14 or 15 wherein the molecular mass cut-off of the electrophoretic membrane used in step (a) is at least 200 kDa.

17.   The method according to claim 16 wherein the molecular mass cut-off of the electrophoretic membrane used in step (a) is 1000 kDa.

18.   The method according to any one of claims 14 to 17 wherein the pH in step (b) is from 6 to 8.

19.   The method according to any one of claims 14 to 17 wherein the pH in step (b) is within 0.5 pH units of the pl of the antibody.

20.   An antibody purified by the method according to any one of claims 1 to 19.

21.   The antibody according to claim 20 being a monoclonal antibody.